

claim 1 wherein:

said booster unit includes a capacitor provided with such a condition that said capacitor is resonated in combination with said coil at a carrier frequency transmitted by said external apparatus.

6. A non-contact information medium as claimed in claim 1 wherein:

said booster unit is further comprised of a capacitor which constitutes a series-resonant circuit in combination with said first coil.

7. A non-contact information medium as claimed in claim 1 wherein:

said booster unit is further comprised of a capacitor which constitutes a parallel-resonant circuit in combination with said first coil.

8. A non-contact information medium as claimed in claim 1 wherein:

said first coil and said second coil are arranged under overlap state in order that a magnetic flux direction of said first coil is made substantially coincident with a magnetic flux direction of said second coil.

9. A non-contact information medium as claimed in claim 1 wherein:

said non-contact information is further comprised of a supporting member; said first coil is arranged on one surface of said supporting member; and said second coil is arranged on the other surface of said

supporting member in such a manner that said second coil is positioned opposite to said first coil.

10. A non-contact information medium as claimed in claim 1 wherein:

in said non-contact information medium, said second coil is arranged inside said first coil.

11. A non-contact information medium as claimed in claim 1 wherein:

said booster unit is further comprised of:

a third coil for receiving an induction current produced in said first coil and electromagnetically coupled to said second coil.

12. A non-contact information medium comprising:
a booster unit including a first communication unit having a first communication distance and capable of wireless-communicating with an external apparatus; and
a non-contact IC (integrated circuit) module capable of wireless-communicating with said booster unit; wherein:

said non-contact IC module is comprised of:
an IC element; and

a second communication unit connected to said IC element, having a second communication distance shorter than said first communication distance, and capable of wireless-communicating with said first communication unit.

13. A non-contact information medium as claimed in claim 12 wherein:

said non-contact IC module is further comprised of a board used to mount thereon said IC element and said second communication unit.

14. A non-contact information medium as claimed in claim 12 wherein:

said first communication unit includes a ferrite bar antenna.

15. A non-contact information medium as claimed comprising:

a non-contact IC (integrated circuit) module;

and

a molded member having a predetermined shape, for protecting said non-contact IC module.

16. A non-contact information medium as claimed in claim 15 wherein:

said molded member contains resin filled into the inside of said molded member.

17. A non-contact information medium as claimed in claim 15, further comprising:

a board for mounting thereon said non-contact IC module.

18. A non-contact information medium as claimed in claim 17, wherein:

said board is constructed of a lead frame.

19. A non-contact information medium as claimed in claim 15, wherein:

said molded member includes a coupling unit capable of coupling said booster unit to said non-contact

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IC module in a non-contact member, said booster unit extending a communication distance of said non-contact IC module.

20. A non-contact information medium as claimed in claim 15, further comprising:

a booster unit connected to said molded member, for extending the communication distance of said non-contact IC module.

21. A method for manufacturing a non-contact information medium, comprising:

a step for forming a non-contact IC module containing an IC (integrated circuit) element and an antenna and capable of wireless-communicating;

a step for forming a booster unit used to extend a communication distance of said non-contact IC module so as to thereby is capable of establishing a wireless communication between said non-contact IC module and an external apparatus; and

a step for coupling said non-contact IC module to said booster unit in a non-contact manner; wherein:

said step for forming the non-contact IC module includes a wiring step for connecting structural elements of said IC element to each other.

22. A non-contact information medium manufacturing method as claimed in claim 21, further comprising:

a step for checking performance of said non-contact IC module; and

a step for mounting only the non-contact IC

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amended.

module which could pass said checking step on a base member; wherein:

both said checking step and said mounting step are provided before said step for coupling said non-contact IC module to said booster unit.

23. A checking system comprising:

a non-contact probe antenna capable of communicating with a non-contact IC module in a non-contact manner; and

a checking apparatus connected to said non-contact probe antenna, in which said non-contact probe antenna checks said non-contact IC module in response to a signal received from said non-contact IC module.

24. A method for manufacturing a non-contact information medium, comprising:

a step for communicating with a non-contact IC (integrated circuit) module by employing a non-contact probe antenna;

a step in which said non-contact probe antenna checks said non-contact IC module in response to a signal received from said non-contact IC module; and

a step for mounting on a base member, only the non-contact IC module which could satisfy a predetermined requirement in said checking step.

25. a communication system comprising:

a non-contact information medium;

an external apparatus capable of communicating with said non-contact information medium by utilizing a

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carrier having a first frequency as a carrier frequency;
and

a communication auxiliary apparatus electro-magnetically coupled to said external apparatus, and capable of emphasizing a second frequency produced by utilizing said first frequency, said second frequency being different from said first frequency.

26. A communication system as claimed in claim 25 wherein:

said first frequency is equal to a carrier frequency, and said second frequency is equal to a sub-carrier frequency which is produced by frequency-dividing said carrier frequency.

27. A communication system as claimed in claim 25 wherein:

said external apparatus includes a first transmitter unit for transmitting first data to said non-contact information medium in such a manner that said first data to be sent to said non-contact information medium is modulated by utilizing said first frequency;
and

said non-contact information medium owns a second transmitter unit for transmitting second data to the external apparatus in such a manner that said second data to be sent to said external apparatus is modulated by using said second frequency.

28. A communication system as claimed in claim 25 wherein:

said non-contact information medium includes a first antenna;

said external apparatus includes a second antenna; and

said communication auxiliary apparatus includes a third antenna which is made coincident with a normal direction of said second antenna.

29. A communication system as claimed in claim 25 wherein:

said non-contact information medium includes a first antenna;

said external apparatus includes a second antenna; and

said communication auxiliary apparatus includes a third antenna which is inclined with respect to a normal direction of said second antenna.

30. A communication system as claimed in claim 25 wherein:

said non-contact information medium includes a first antenna;

said external apparatus includes a second antenna; and

said communication auxiliary apparatus includes a third antenna; and

said first antenna is capable of communicating with said second antenna via said third antenna at a position separated from a normal line of said second antenna.

31. A communication system as claimed in claim 25 wherein:

said communication system includes a plurality of said communication auxiliary apparatuses; and at least one of said plural communication auxiliary apparatuses is electromagnetically coupled via any one of the remaining plural communication auxiliary apparatuses in an indirect manner.

32. a communication system comprising:

a non-contact information medium;

an external apparatus capable of communicating with said non-contact information medium by utilizing a carrier having a first frequency as a carrier frequency; and

a first communication auxiliary apparatus electromagnetically coupled to said external apparatus, capable of emphasizing said first frequency; and

a second communication auxiliary apparatus electromagnetically coupled to said external apparatus, capable of emphasizing said second frequency.

33. A communication auxiliary apparatus comprising:

a base member; and

a communication unit coupled to said base member and electromagnetically coupled to said external apparatus, said communication unit being capable of emphasizing a second frequency different from a first frequency in such a case that an external apparatus is capable of communicating with a non-contact information

medium by utilizing a carrier having a first frequency as a carrier frequency, said second frequency being produced by using said first frequency.